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| 09/975,590 | 10/11/2001 | Dean Bernard Jacobs | BEAS-01077US2 | 8686 |

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| EXAMINER |
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OSMAN, RAMY M

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| ART UNIT | PAPER NUMBER |
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2157

DATE MAILED: 08/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Status of Claims

1. This communication is in response to amendment filed May 25, 2006. Claims 1-41 are pending.

Response to Arguments

2. Applicant's arguments filed 5/25/2006 have been fully considered but they are not persuasive.
3. Regarding 112 2nd paragraph rejections:
4. Applicant argues that "information relating to a change" and "delta" are not the same because the information need not contain information for an update.

In reply, the claim language is broad and suggests that they are the same. The information and the delta are said to both contain update information. The claim does not state that they are different, and does not explicitly state how they are different. The claim is suggesting redundant steps, or seems to be missing a step, or is worded incorrectly.

5. Applicant argues that the limitation "... if the slave server has not missed a previous change" is feasible based on an example of the slave server missing a change when the change is sent out.

In reply, there is no mention of a "change" being sent out to slave servers where it can then be "missed". Furthermore, information relating to a change in data is interpreted to be the same as version number of data due to the broad language of the claim.

6. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies are not recited in

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the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

7. Regarding 102 (b) rejection:

8. Applicant argues that Van Ryzin does not teach “a delta be sent from the master server to the slave server if the data on the slave server does not correspond to the version number” because in Van Ryzin, entire files are apparently sent to a network computer rather than deltas.

In reply, the files that are sent by Van Ryzin reference contain deltas. Therefore the broad limitation is taught by Van Ryzin. (column 4 line 50 – column 5 line 15)

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1,5,14,19-21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are unclear. For example, on lines 5-6 of claim 1, if the packet of information includes update information then there would be no reason to request a delta, on lines 9-10, which contains update information. This is because the update information already arrived at the slave by way of the packet of information. The other independent claims contain similar deficiencies. The claims seem to be missing steps or be worded incorrectly.

11. Claim 14 (and any subsequent similar claim) rejected under 35 U.S.C. 112, second paragraph, as being indefinite. On lines 9-10, it is unclear what it means to: “commit the

information if the slave server has not missed a previous change”. It is unclear how a ‘previous change’ can be missed. This rejection also applies to other claims that may contain this limitation.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-41 rejected under 35 U.S.C. 102(b) as being anticipated by Van Ryzin (US Patent No 5,909,689).

14. In reference to claims 1 and 5, Van Ryzin teaches a method for replicating data from a master server to a slave server over a network, the method comprising the steps of:

 sending a packet of information from the master server to the slave server, the information relating to a change in the data stored on the master server and containing a version number for the present state of the data, the packet of information including first updated information for the data (column 4 lines 50-60,66,67);

 allowing the slave server to determine whether the data on the slave server has been updated to correspond to the version number contained in the packet (column 4 lines 50-60);

 requesting a delta be sent from the master server to the slave server if the data on the slave server does not correspond to the version number contained in the packet, the delta

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containing information needed to update the slave server (column 4 lines 50-60 and column 6 line 66 – column 5 line 15).

15. In reference to claim 2, Van Ryzin teaches a method according to claim 1, further comprising: storing an original copy of the data on the master server (column 2 lines 10-20 & 60-67).

16. In reference to claim 3, Van Ryzin teaches a method according to claim 1, further comprising: persistently caching the data on a local disk for each slave server (column 5 lines 5-16 and column 6 lines 30-60).

17. In reference to claim 4, Van Ryzin method according to claim 1, further comprising: determining a unique version number for the current state of the data on the master server if the data has changed (column 2 lines 1-35).

18. In reference to claim 6, Van Ryzin teaches a method according to claim 5, further comprising: sending the delta from the master server to the slave server (column 2 lines 1-35).

19. In reference to claim 7, Van Ryzin a method according to claim 5, further comprising: committing the delta to the slave server (column 2 lines 1-35).

20. In reference to claim 8, Van Ryzin teaches a method according to claim 5, further comprising: updating the version number of the slave server after committing the delta.(column 5 lines 5-50).

21. In reference to claim 9, Van Ryzin teaches a method according to claim 5, further comprising: periodically sending the version number from the master server to a slave server (column 4 lines 45-60 and column 6 lines 40-55).

22. In reference to claim 10, Van Ryzin teaches a method according to claim 5, further

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comprising: sending the version number to a slave server until the slave server acknowledges receipt of the version number (column 4 lines 50-67).

23. In reference to claim 11, Van Ryzin teaches a method according to claim 5, further comprising: including data with the version number that is necessary to update a slave server (column 4 lines 50-67).

24. In reference to claim 12, Van Ryzin teaches a method according to claim 11, further comprising: committing the data necessary to update the slave server as soon as it is received (column 5 lines 50-60).

25. In reference to claim 13, Van Ryzin teaches a method according to claim 5, further comprising: determining the scope of the delta before sending it from the master server (column 4 lines 50-56).

26. In reference to claims 14,19-21 and 38-41, Van Ryzin teaches a method, computer readable medium, system and computer system respectively, for replicating data over a network including a master server and at least one slave server, the method comprising the steps of:

sending a packet of information from a master server to each slave server on the network, the Information relating to a change in the data stored on the master server and containing a current version number for the present state of the data, the information further relating to previous changes in the data and a version number for each previous change (column 4 lines 50-60,66,67);

allowing each slave server to determine whether the slave server has been updated to correspond to the current version number (column 4 lines 50-60);

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allowing each slave server to commit the information if the slave server has not missed a previous change (column 4 lines 56-60,66,67); and

allowing each slave server having missed a previous change to request that previous change be sent from the master server to the slave server before the slave server commits the packet of information (column 2 lines 10-20, column 4 lines 50-60,66,67 and column 5 lines 1-60).

27. In reference to claim 15, Van Ryzin teaches a according to claim 14, further comprising: committing the packet of information to a slave server (column 2 lines 1-35).

28. In reference to claim 16, Van Ryzin teaches a method according to claim 14, further comprising: aborting the commit of the packet of information if a slave server cannot commit the update (column 4 lines 55-67).

29. In reference to claim 17, Van Ryzin teaches a method according to claim 14, further comprising: determining the scope of the delta before sending it from the master server (column 4 lines 50-56).

30. In reference to claim 18, Van Ryzin teaches a method according to claim 14, further comprising: including the scope of each the previous changes in the delta. (column 4 lines 50-56).

31. In reference to claims 22, Van Ryzin teaches method according to claim 21, further comprising: determining whether each of the at least one slave server can commit the data (column 2 lines 1-35).

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32. In reference to claim 23, Van Ryzin teaches method according to claim 21, further comprising: determining whether each of the at least one slave server has sent a response back to the master server (column 2 lines 1-35 and column 4 line 50 – column 5 line 50).

33. In reference to claim 24, Van Ryzin teaches method according to claim 21, further comprising: determining whether any of the at least one slave server can commit the data (column 7 lines 5-67).

34. In reference to claim 25, Van Ryzin teaches method according to claim 21, further comprising: committing the data only if each of the at least one slave server can process the commit (column 4 line 50 – column 5 line 50).

35. In reference to claim 26, Van Ryzin teaches method according to claim 21, further comprising: aborting the data only if any of the at least one slave server cannot process the commit (column 2 lines 1-35 and column 4 line 50 – column 5 line 50).

36. In reference to claim 27, Van Ryzin teaches method according to claim 21, further comprising: committing the data to those slaves that are able to process the commit (column 4 line 50 – column 5 line 50).

37. In reference to claim 28, method according to claim 21, further comprising: multicasting the update to any of the at least one slave server that were not able to process the commit (column 2 lines 1-35 and column 4 line 50 – column 5 line 50).

38. In reference to claim 29, Van Ryzin teaches method according to claim 21, further comprising: heart beating the new version number to any of the at least one slave server that were not able to process the commit (column 4 line 50 – column 5 line 50).

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39. In reference to claim 30, Van Ryzin teaches method according to claim 21, further comprising: requesting a delta be sent to a slave server that was not able to process the commit (column 4 line 50 – column 5 line 50).

40. In reference to claims 31-37, Van Ryzin teaches a method, a computer readable medium, a computer program product, and a system respectively, for replicating data over a network, the method comprising the steps of:

(a) determining whether the replication should be accomplished in a one or two phase method (column 4 lines 57-67 and column 5 lines 30-40);

(b) sending replication information determined to be accomplished in a one phase method by:

sending a packet of information from the master server to the slave server, the information relating to a change in the data stored on the master server and containing a version number for the present state of the data; receiving the packet of information to a slave server (column 2 lines 1-35 and column 4 lines 50-67);

allowing the slave server to determine whether the data on the slave server has been updated to correspond to the version number (column 2 lines 1-35 and column 4 lines 50-67); and

requesting a delta be sent from the master server to the slave server if the slave server does not correspond to the version number, the delta containing information needed to update the slave server (column 2 lines 1-35 and column 4 lines 50-67);

(c) sending replication information determined to be accomplished in a two phase method by:

sending a packet of information from the master server to the slave server, the information relating to a change in the data stored on the master server and containing a version number for the present state of the data (column 5 lines 6-61);

allowing the slave server to determine whether the slave server has been updated to correspond to the version number, and to further determine whether the slave server can process the packet of information (column 5 lines 6-61);

sending a signal from the slave server to the master server indicating whether the slave server needs to be updated and whether the slave server can process the packet of information (column 5 lines 6-61);

sending a response signal from the master server to the slave server indicating whether the slave server should commit to the packet of information; and committing the packet of information to the slave server if so indicated by the response signal (column 5 lines 6-61).

41. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramy M. Osman whose telephone number is (571) 272-4008. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RMO
August 2, 2006


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